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# **Standing Committee on Industry, Science and Technology**

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**EVIDENCE**

**Thursday, March 1, 2018**

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**Chair**

**Mr. Dan Ruimy**



## Standing Committee on Industry, Science and Technology

Thursday, March 1, 2018

• (1530)

[English]

**The Chair (Mr. Dan Ruimy (Pitt Meadows—Maple Ridge, Lib.)):** Welcome, everybody. Pursuant to Standing Order 108(2), we're in the study of iPhone performances and their batteries with respect to the interests of Canadian consumers.

We'll have two panels today. From 3:30 to 4:30, we have the Competition Bureau, with Alexa Gendron-O'Donnell, the associate deputy commissioner, economic analysis directorate, competition promotion branch. We also have, from Primate Labs, John Poole, president.

After that we will take a quick break and we'll go right into the second panel with Apple Canada, where we have Jacqueline Famulak, regional counsel, Canada and Latin America, and Simon V. Potter, counsel, McCarthy Tétrault LLP.

We have the PowerPoint from Mr. Poole and we also have submissions from iPhone. If there's no objection, I think it would be okay to put it on our website. We need consent.

Committee, are we okay if everybody shares it?

**Some hon. members:** Agreed.

**The Chair:** Excellent.

We're going to get started.

Ms. O'Donnell, you have up to 10 minutes.

**Ms. Alexa Gendron-O'Donnell (Associate Deputy Commissioner, Economic Analysis Directorate, Competition Promotion Branch, Competition Bureau):** Thank you, Mr. Chair.

As mentioned, my name is Alexa Gendron-O'Donnell. I'm an associate deputy commissioner at the Competition Bureau. I head up our economic analysis branch.

[Translation]

I am pleased to appear today before the committee studying Apple iPhone performances and their batteries.

For the sake of clarity, I would like to say at the outset that I am unable to comment on the specifics of potential enforcement cases, as the law requires the bureau to conduct its enforcement work in confidence.

[English]

Specifically, this means that unfortunately I cannot respond as to whether or not we are currently investigating Apple on this or any other issue, nor can I speak to hypotheticals. I do, however, want to provide some context about the bureau and about its mandates. I'll highlight a few recent examples of enforcement cases within the digital economy.

[Translation]

The Competition Bureau, as an independent law enforcement agency, ensures that Canadian consumers and businesses prosper in a competitive and innovative marketplace that delivers competitive prices and more product choice.

The bureau is headed by the commissioner of competition and is responsible for the administration and enforcement of the Competition Act and three of Canada's labelling statutes.

[English]

The Competition Act provides the commissioner with the authority to investigate anti-competitive behaviour. The act contains both civil and criminal provisions and it also grants the commissioner the authority to make representations to regulators.

On the civil side, the bureau conducts investigations into false or misleading representation and other deceptive marketing practices, non-criminal competitor collaborations, abusive conduct by dominant companies, and it reviews mergers.

On the criminal side, the bureau conducts investigations into companies that knowingly or recklessly engage in false or misleading representations, deceptive telemarketing, pyramid schemes, bid rigging, price fixing, market allocation, and output restriction.

Owing to the unique types of investigations that we conduct, the Competition Bureau is staffed mainly by a mix of competition law officers, lawyers, and economists.

Given that many markets are global in scale, the Competition Bureau also regularly co-operates with its key international counterparts, including the U.S. and the EU, and has developed partnerships with other law enforcement agencies and government regulators both internationally and domestically.

The bureau has two enforcement branches that investigate anti-competitive activity in the marketplace. First, the mergers and monopolistic practices branch reviews proposed merger transactions and investigates practices that could negatively impact competition. The second one is the cartels and deceptive marketing practices branch which fights criminal or deceptive business practices that hurt consumers and competition in the market.

• (1535)

[*Translation*]

The bureau's advocacy, economic analysis, and international work is supported by the competition promotion branch, which actively encourages the adoption of pro-competition positions, policies, and behaviours by businesses, consumers, regulators, government, and international partners.

[*English*]

It's worth repeating in detail that, as a law enforcement agency, the bureau conducts its activities, including its investigations, in confidence, meaning that all non-public information gathered by the bureau in enforcement matters, whether obtained voluntarily or through the use of formal powers, is held on a confidential basis.

While a party under investigation may itself release information related to an investigation, the bureau does not comment publicly on an investigation or even its existence until the matter has either been made public by the party itself or until certain steps have been taken, such as filing an application with the competition tribunal or announcing a settlement.

Even in those instances, we are required by law to keep confidential any information that is not public. This is done to protect confidential information provided to us by our sources and also to avoid harming the reputation and integrity of defendants before their case has been adjudicated. This ultimately protects the integrity of the bureau's investigations. That said, the bureau can share confidential information with other law enforcement agencies, but solely for the purpose of administering and enforcing the act.

The goal of our enforcement is to protect Canadian consumers with specific and general deterrence of anti-competitive behaviour in the market. We've had a number of recent enforcement successes with a focus on the digital economy, and I'd really like to highlight those for you now.

Last week, through a consent agreement with Enterprise Canada car rental, the bureau reached a third resolution in its investigation of drip pricing in the car rental industry. That company agreed to pay a \$1 million penalty for what the bureau concluded were false or misleading advertising for prices and discounts on car rentals. Those prices were unattainable by consumers because of additional mandatory fees tacked on right before checking out.

Following on the heels of earlier agreements with Avis, Budget, Hertz, and Dollar Thrifty, the total penalties paid by these companies thus far is now in excess of \$5 million, and a further \$250,000 was contributed to the bureau's investigative costs. Those companies involved have also agreed not to engage in this type of behaviour going forward.

In January of last year, Amazon agreed to pay \$1 million in an administrative monetary penalty and \$100,000 towards the bureau's investigative costs as part of a consent agreement resolving our concerns over their online pricing practices, which were implying greater savings available to consumers than was actually the case. Amazon also modified the way that it advertised its list prices on its website. It put policies and procedures in place to ensure that consumers were not misled by inaccurate savings claims.

Earlier this month, the Federal Court upheld the bureau's consent agreement with Apple and major e-book publishers Hachette, Macmillan, and Simon & Schuster. The agreements followed a bureau investigation that concluded an anti-competitive arrangement between four publishers and Apple led to higher e-book prices for Canadian consumers. This decision will allow retailers to offer discounts on e-books to consumers and ensure that a fourth consent agreement with publisher HarperCollins will enter into force.

In January of this year, the bureau took legal action against Ticketmaster and its parent company Live Nation to stop them from allegedly making deceptive marketing claims to consumers when advertising prices for sports and entertainment tickets. In this case, the commissioner is alleging that consumers have been led to believe that they can get tickets at a certain price when in fact mandatory fees imposed by companies often increase the advertised price by 20% to 65%. Among other things, the bureau is seeking an end to the alleged deceptive marketing practices, as well as an administrative monetary penalty.

On the competition promotion side, the bureau is actively engaged in advocacy within the digital economy. One of our most notable projects in this area is our recent market study on fintech, in which we examined the barriers to growth and the adoption of financial technology in Canada and provided a number of recommendations to help regulators and policy-makers continue to promote fintech in three key areas: how consumers pay for goods, how they obtain loans for themselves and their businesses, and how they receive financial advice.

Our final report recommended the modernization of laws and regulations to encourage the entry and adoption of new technologies while maintaining consumer confidence and safety in this rapidly evolving sector. We were extremely pleased to see a significant number of these recommendations incorporated in this week's federal budget.

The bureau also recently released a discussion paper on the issue of big data, with a view to providing guidance on the application of the act and to initiate discussion on how this topical issue should affect competition policy in what is becoming an increasingly data-driven economy. Our findings were that the key principles of competition law enforcement remain valid in big data investigations and, further, that enforcement needs to strike the right balance between taking steps to prevent behaviour that truly harms competition and over-enforcement that chills innovation and dynamic competition.

Although unrelated to the digital economy, I did want to raise one final case with all of you, which is the bureau's participation in a class action settlement with Volkswagen. If approved by the courts, it will provide \$290.5 million in compensation to consumers in the Volkswagen, Audi, and Porsche emissions case. Combined with last year's two-litre diesel vehicle settlement, the bureau's investigation has resulted in \$2.39 billion in compensation for Canadian consumers. Volkswagen and Audi will also pay a penalty of \$2.5 million specifically to address the bureau's concerns related to false or misleading advertising and environmental marketing claims that were made to promote certain vehicles with a three-litre diesel engine.

• (1540)

[Translation]

To stay within my allotted time, I will end my comments here. However, I will endeavour to answer any questions you have, recognizing that I am unable to speak to specifics about our enforcement work that has yet to be made public.

I would like to thank the committee for the opportunity to appear today.

[English]

Thank you. I look forward to any questions you may have.

**The Chair:** Thank you very much. I look forward to asking you some questions.

We're going to move to Primate Labs.

Mr. Poole, you have up to 10 minutes.

**Mr. John Poole (President, Primate Labs):** Mr. Chair, I'd like to take this opportunity to thank the committee for allowing me to appear today to discuss the topic of the performance of iPhones and their batteries. My name is John Poole. I'm the founder and president of Primate Labs, a software company based in Toronto.

Primate Labs develops Geekbench, which is a cross-platform benchmark available for Android, iOS, and other platforms. Geekbench provides an objective measure of performance for devices and computers. It reports this performance through a score. These scores are calibrated against a baseline machine and provide a relative measure. You can compare a device's performance against both the baseline and other devices that have run Geekbench. Higher scores indicate higher performance, with an approximate linear function such that double the score means double the performance.

Geekbench also uses the Geekbench browser, which is an online database. Whenever Geekbench is run, the benchmark results are

uploaded to our server. We receive approximately 400,000 to 1.1 million results each month from our users. We are able to take these results and publish them to the public in general so that people can see the performance of various individual devices. We are also then able to collect these results and statistics on them, and report aggregate scores. Generally speaking, what we've done in the past is report the average score for each device, but as I will go into later, we also started looking at the distribution scores once we became aware of the performance issues with the iPhone.

Here are the particulars for the timeline of events that led us to conduct this analysis. In approximately September 2017, we started receiving complaints from Geekbench users that their phones felt slow. These reports were also backed up by reduced Geekbench scores. Normally, when we've seen reduced Geekbench scores from our users, we're able to identify a cause that leads to these lower scores. In this case we were unable to determine that cause, nor were we able to reproduce the results internally in our own laboratory testing.

We initially assumed that this was due to a software update—iOS 11—that Apple had released within approximately the same time frame. Whenever these updates come out, they cause the phone to potentially run a little slower for a while as the phone upgrades its internal databases and rearranges data to meet the new format of the operating system. Usually, these performance issues resolve themselves in a day or two as the phone finishes its background tasks. Our assumption leading up to December was that this was a software issue and that it would resolve itself fairly quickly for most users.

However, in December 2017 we came across a Reddit post with the title “PSA: iPhone slow? Try replacing your battery!” It contained the quote, “Apple slows down phones with low capacity batteries, replacing it”—meaning the battery—“makes them full speed again.”

At this point, we changed our theory. We went from thinking this was a software issue to a hardware issue, and we started to dig in and look at the results that users had uploaded to our service to see if we could actually determine the scope and magnitude of this slowdown that users were experiencing. That led us to publish the article “iPhone Performance and Battery Age”. This article contained kernel density plots of Geekbench scores for several iOS versions. We broke down the results by phone and by operating system version. Again, we based this on user benchmark data from the Geekbench browser. We used approximately 120,000 results from both iPhone 6 and iPhone 7.

Here is an example of the charts that were included in our article.

On the left, we have results from an iPhone 6 running iOS 10.2, and on the right we have results from an iPhone 6s running iOS 10.2.1. As you can see on the left, with iOS 10.2, the distribution is what we would expect from most devices. We have a large peak centred around the average score for that device. On the right, however, is where things get interesting. We see the large peak around the average, but we also see several smaller peaks at several lower tiers of performance. This suggested to us that the slowdown was happening to users, that it was affecting a non-trivial number of devices, and that the cause of it was introduced in iOS 10.2.1. However, from our data, we were unable to determine exactly what that change was or why it was introduced. Again, this is sort of repeating the description I just gave.

Apple made a couple of statements in December 2017 that sort of confirmed our results and also explained what was happening. Apple indicated that the change was due to a software update and that in the iPhone 6s, performance could be reduced for iOS 10.2.1.

• (1545)

This software change was introduced to work around the hardware issue. This hardware issue in particular was the battery. What happened was approximately in December 2016, users started to complain about sudden shutdowns of their iPhones. They'd be using a phone, and when the battery level hit approximately 30% as reported in the operating system, the phone would suddenly shut down.

What was happening under the covers when the sudden shutdown happened was that, when a processor runs at full power, the fastest performance, the sort of performance you'd expect when you're running a benchmark like Geekbench or any sort of demanding application on your phone, when the processor is running at a higher performance, it uses more power. As the battery degrades, as the battery ages, which all lithium-ion batteries do, the battery is no longer able to provide the power to the processor that it needs to run at that full performance. When that happened, the phone suddenly shut down.

The workaround that Apple introduced in iOS 10.2.1 was when it detected that the battery had degraded, when it detected that it no longer was able to deliver the power that the processor needed, the system as a whole would reduce the power, the performance of the processor, so it no longer overtaxed the battery.

One of the questions I was asked ahead of coming to the committee was, does this affect Canadian and American iPhones differently? Again, using the kernel density plots that we used in the original article, we looked at results from the iPhone 6s running, at the time, the latest operating system, iOS 11.2, and looked at approximately 190 Canadian results and just under 1,600 American results.

The classification of these results is a little ad hoc in that we're using the location of the phone when the benchmark was run, not the country where the phone was sold. It's entirely possible that we could have a few phones here in this dataset that are American phones running benchmarks in Canada or vice versa. Personally, I believe that these phones are very few in number and should not affect the majority of the dataset.

Again, here's another kernel density plot. On the left we have Canadian phones and on the right we have American phones. If you overlay the graphs, you'll see that the shape of both graphs is approximately similar, so the distribution of results is approximately the same. Similar distribution between the phones suggests there is not a difference in how this issue affects Canadian phones and American phones, or more broadly, Canadian consumers and American consumers.

Thank you.

• (1550)

**The Chair:** Thank you very much.

We're running a little short on time, so we're going to go right into questioning. We're going to start off with Ms. Ng. You have five minutes.

**Ms. Mary Ng (Markham—Thornhill, Lib.):** Thank you, Mr. Chair.

Thank you both for coming here and appearing before us today on this important topic.

My first question is for Ms. O'Donnell.

You've given us a number of examples, but are you able to talk to us about any actions or enforcement that might have been taken or that the bureau is undertaking around smart phones?

**Ms. Alexa Gendron-O'Donnell:** As I mentioned before, unless something is already public, we unfortunately can't speak to whether or not we have something ongoing in the space. I think all of us refer back to our work on big data and some of the other things I mentioned just as examples of how the bureau is engaging with the fact that we are seeing a lot of new products and systems in the digital economy. It's something we're observing, but unfortunately, I can't speak to specifics on anything.

**Ms. Mary Ng:** Okay.

Can you talk to us about the application of the Competition Act? Does it have jurisdiction to cover foreign firms?

**Ms. Alexa Gendron-O'Donnell:** The Competition Act certainly applies to companies that operate in Canada. There are provisions there, particularly when I think about our deceptive marketing provisions, that make it such that the person you are—quote, unquote—"deceiving" does not have to be in Canada, but as soon as a company is operating in Canada, they do have to comply with Canadian law, the Competition Act being one of those.

**Ms. Mary Ng:** I want to turn to Mr. Poole.

I take it from the presentation you've shared with us that the impetus for your company to look at this was a result of both data and consumer experience. Were there any other factors for you to look at this?

**Mr. John Poole:** Most of this was driven both by reports of our users and from the reports we were seeing in the media, especially around the time of the Reddit post. That's when interest in this topic really exploded, so mostly it was driven by that. You know, our individual customers were complaining that their phone performance had been reduced, and then users saw that you could have reduced performance, and then replacing the battery, of course, then suddenly made your phone operate as if it was new.

**Ms. Mary Ng:** I'm going to shift a little here.

Do you think the results constitute some evidence towards what some allege, that Apple engages in planned obsolescence of its products?

**Mr. John Poole:** When I initially wrote the article I said this was very unfortunate, because this seemed like planned obsolescence, older phones being made slower.

In this case, though, it's not based on the age of the phone; it's based on the ability of the battery to provide the power that the phone needs. Apple was dealing with a particular issue where their phones were shutting down abruptly. Given the option between a phone that shuts down abruptly and a phone that operates slightly slower, they made the decision that a slower phone was better.

Regarding Apple's perhaps lack of transparency around that issue, I'm not sure what they should have done. The lack of transparency was certainly disappointing and could definitely lead people to say this was an issue of planned obsolescence. However, I certainly don't think that's the case.

• (1555)

**Ms. Mary Ng:** Thank you.

Ms. O'Donnell, what role does the Competition Bureau play with respect to consumer protection?

**Ms. Alexa Gendron-O'Donnell:** Within our act, we have deceptive marketing provisions, and maybe I'll tell you a bit about those.

We have civil provisions and we also have criminal provisions. In our civil provisions, we're looking at representations to the public that are false or misleading in a material respect. When we look at that, we think about the general impression that the representation gives but also the literal impression. When we talk about material, that's our way of saying, to what extent did that representation cause a change in consumer behaviour? One example of that could be whether the consumer bought the product or not.

The criminal provisions are very similar, but obviously there's that extra element of criminal intent. We would ask, did they do it knowingly or recklessly? In that sense, it's a bit different. We involve our colleagues at the Public Prosecution Service of Canada to help with these. There are provisions there which, while they're not consumer protection per se—that's the mandate of our provincial colleagues—they are there to protect consumers from false or misleading advertising. Those are the ones that we enforce.

**Ms. Mary Ng:** All right, thank you. That was very helpful.

**The Chair:** Thank you very much.

[*Translation*]

Mr. Bernier, you have five minutes.

**Hon. Maxime Bernier (Beauce, CPC):** Thank you, Mr. Chair.

I would like to thank the witnesses for being with us today. We appreciate it very much.

[*English*]

My first question will be for Mr. Poole.

With regard to your research, did you have any feedback from some of your peers about the quality of your research and investigation?

**Mr. John Poole:** We haven't had much direct feedback on the research. Generally the feedback has been positive. Most people that we've spoken to, particularly with a statistics background, have said the research seems quite sound.

**Hon. Maxime Bernier:** With your conclusion and all that, you were saying that the Canadian iPhone and U.S. iPhone had the same challenges.

I'm sure that you've read the answer from Apple. What do you think about their position? You said "lack of transparency", but after that I think they came forward with a proposal. Do you think their position is a real one, or were they doing that deliberately to push the sales of the new phone?

**Mr. John Poole:** I'm not sure. Which proposal are you referring to from Apple?

**Hon. Maxime Bernier:** Their answer after all that. The proposal they sent to the committee.

**Mr. John Poole:** I haven't read the proposal that Apple has sent to this committee.

**Hon. Maxime Bernier:** Okay, but you know what Apple said after that happened. Do you think they were doing that unintentionally or was it intentional to try to sell new phones?

**Mr. John Poole:** I'm not sure whether they were doing this intentionally to sell new phones.

I believe they should have been very transparent with this at the beginning when they reduced the performance of the phone. The fact that this was a mystery to basically all consumers, including me.... I think I'm fairly well positioned to comment on performance of phones, but this result caught me completely by surprise when I discovered it in December. I wish Apple had been very transparent from the beginning.

What their motives were, whether this was to sell more phones, to avoid a recall of existing phones, I unfortunately can't comment to that.

[*Translation*]

**Hon. Maxime Bernier:** All right, thank you.

I enjoyed your presentation on the Competition Bureau. You said that we cannot become involved in the bureau's internal affairs, and that is quite understandable.

Having said that, I imagine that consumers are quite concerned about what happened. Has the bureau received complaints about this specific file?

**Ms. Alexa Gendron-O'Donnell:** Unfortunately, whether or not we have received complaints and the number of complaints is also confidential information.

However, as you mentioned, our bureau accepts complaints and anyone can call us and report their concerns.

**Hon. Maxime Bernier:** I tried.

Thank you.

[English]

**Mr. Colin Carrie (Oshawa, CPC):** Mr. Poole, in your opinion, did Apple misrepresent its product to the public in any way?

**Mr. John Poole:** It's hard to say. The claims that Apple makes about performance tend to coincide with device launches. That's when they really do talk the most like, "This phone is faster than the old phone; this is roughly by how much."

Most people in the industry look at the figures that manufacturers present as an optimistic best-case scenario. A device manufacturer will find the one benchmark that shows a 2X performance and will say, "up to two times the performance".

There are also, of course, factors that are outside a device manufacturer's control that might affect the performance of its phones. A great example of this would be thermals, where if your phone is in a hot environment, it will more likely run slower than the phone in the cold environment, simply due to the mechanics of how modern integrated circuits work.

In this particular case of having the battery start to slow down, I think Apple wasn't as forthcoming as it could have been about the condition of the battery. We've heard reports of users with a slow phone, and this was ahead of Apple's battery upgrade program that it announced in late December. They would know their phone was slow. They would be able to verify this with Geekbench or with other tools, and they would take their phone into an Apple store and say, "My battery is slow; I would like to upgrade this", and Apple would say, "No, no, your battery is fine." Clearly, Apple wasn't being as forthcoming as it could be.

To speak particularly to deceptive claims, I'm not sure how much Apple claims of its iPhones 6s two years after they've been released. The question is, of course, do consumers expect performance to degrade over time? I would expect the average consumer would not. Consumers are used to the idea of battery charge decreasing over time. As I mentioned before, lithium ion is a fairly established technology and everybody understands the batteries will reduce capacity over time. I don't think anybody expects their phone to suddenly get slower because of the quality or the age of its battery.

• (1600)

**The Chair:** Thank you.

We're going to move to Mr. Masse. You have five minutes.

**Mr. Brian Masse (Windsor West, NDP):** Thank you, Mr. Chair.

Thank you to the witnesses for being here.

One of the reasons I proposed the study was to ensure that Canadian consumers are going to receive fair and equitable treatment. It's just my opinion, but I believe that the Competition Bureau does an excellent job with the resources it has and the legislation that's in place. However, it fails and pales in comparison to what other countries have in order to deal with consumer-related issues, not only in terms of competition but also privacy, and also the protection of public safety.

My first question is for Mr. Poole.

In your analysis of this, have you done this type of analysis for any other phones or operating systems, and if you have, what were the results of those? Your analysis that you did here with the graph is a good one for people to grasp. Is this a normal practice that you would do, or is this something that was developed because of the complaints coming in on the particular phones that you did them on?

**Mr. John Poole:** We developed these graphs in response to the public interest in the iPhone battery issue. We have run these charts for other phones. We've done a selective sampling of popular Android handsets, as well as laptop computers, anything that basically runs off a battery. These problems currently are unique to iPhones.

**Mr. Brian Masse:** Have you subsequently done analyses on any other newer models of iPhones or previous phones, or has it just been this particular model?

**Mr. John Poole:** We've looked at the iPhone 6s, and we've also looked at the iPhone 7. The iPhone 7 has a similar issue. The performance issue started appearing in iOS 11.2. We believe it's too early for this defect to show up in the iPhone 8 or the iPhone 10.

**Mr. Brian Masse:** One of my concerns is whether this is a one-off or a pattern of behaviour. We've seen cases similar to Volkswagen and others, and I was involved previously with the Toyota file, where there were several statements by the company that turned out to be erroneous in terms of consumer protection and the problems related to their products.

Ms. Gendron-O'Donnell, I know you can't comment on specific cases, but will you be examining market share? Is that part of the process? In terms of a company releasing a product or influencing a product that's different from what they marketed and they gain market share based on that, is that part of an overall analysis in terms of an investigation to see if it has advanced the company's percentage of market share and changed that for consumers and also other competitors?



**Ms. Alexa Gendron-O'Donnell:** Again, without being able to speak to the specifics of this case, in a general sense, the analysis that we undertake really depends on the part of the act that we are looking at. For example, in an abuse of dominance matter we are certainly looking to see whether the company is dominant. In a deceptive practices matter, I believe what you're referring to would come into play if we determined that penalties were required. We have a list of factors that can come into play when we're determining, for example, how large an administrative monetary penalty should be. One of them could in effect be how long the conduct took place, what was the breadth of the conduct, and the extent to which there were other factors such as profit made from this conduct. In certain ways, those kinds of analyses would fit with our investigations.

• (1605)

**Mr. Brian Masse:** With that, not to this specific case, but I am of the opinion that the \$35 compensation for the batteries is tenuous at best, especially with shipping costs. That's my personal opinion. I don't believe it's sufficient for consumers. However, for compensation on any product or service are you able to levy any type of correction, and can it be different from what's proposed in other countries?

France, Israel, South Korea, and the United States are having different investigations. Are you able, under the legislation, to communicate with their different agencies and organizations, governmental and justice, to participate in any type of information sharing?

**Ms. Alexa Gendron-O'Donnell:** I will say from a general perspective that we have a lot of co-operation with our counterpart agencies, as I mentioned in my opening remarks. Again, I can't speak to this case but we have various MOUs with all of these different agencies that allow us to speak with them, if it's appropriate, if we are enforcing the act.

With respect to how, I think what you're referring to is we're going back to this idea of what a remedy could look like.

**Mr. Brian Masse:** Yes.

**Ms. Alexa Gendron-O'Donnell:** When we, for example, negotiate consent agreements, they can take a large variety of forms. I'll point to a previous case we had with Telus where they committed to retribute up to \$7.34 million to affected consumers. The form that penalty takes is very case-specific, depending on the facts of our investigation.

**Mr. Brian Masse:** Thank you.

Thank you, Mr. Chair.

**The Chair:** We're going to move to Mr. Baylis.

You have five minutes.

**Mr. Frank Baylis (Pierrefonds—Dollard, Lib.):** Thank you, Chair.

Mr. Poole, I'd like to understand a bit more of the technicalities. If I understood you correctly, barring this update, once my phone hits about 30% left on the battery, what will happen if I don't do this update?

**Mr. John Poole:** If you were not to apply this update to your phone, when your phone hits approximately 30% charge, if your

battery had degraded past a certain point, then your phone would be susceptible to shutting down unexpectedly. Should, let's say, you launch an application or something, it would just shut off immediately.

**Mr. Frank Baylis:** Did that problem exist on previous phones? It started with the iPhone 6. Is that correct?

**Mr. John Poole:** I believe it did start with the iPhone 6. It was a large issue with the iPhone 6s that attracted some media attention in approximately December 2016. That was the first phone where I'd heard of this in a widespread manner.

**Mr. Frank Baylis:** When that happens, I'd have a choice normally if I saw that happening. What would I normally have done if I didn't do the software update?

**Mr. John Poole:** If your phone was susceptible to shutting down abruptly, there wouldn't be a lot you could do. At the time, unfortunately, no one quite knew why these phones were shutting down abruptly. You might suspect it's the battery. You could go out and buy an external battery pack, a battery case for your phone, so that it would have more longevity. You could take it into an Apple store and have the battery replaced at your own personal cost. Those would be the options available to you.

**Mr. Frank Baylis:** Changing the battery or supplanting the battery.

**Mr. John Poole:** Exactly.

**Mr. Frank Baylis:** I didn't necessarily have to have it run slow. I could have had that choice, if I knew that either you change the battery and your phone could keep running at a normal rate.... I wasn't given that choice in this case, and I wasn't told about it. Something just happened, right?

**Mr. John Poole:** Exactly. When Apple released iOS 10.2.1, their release notes mentioned—I don't remember the exact wording—a vague notion about power management and some description of that. I don't believe it tied into the sudden shutdown issue. It certainly didn't mention it.

**Mr. Frank Baylis:** There was a coded thing, just looking at power management.

**Mr. John Poole:** Exactly, and once you applied that update, your phone would no longer shut down, but it might be running slower than it would were it a new phone.

**Mr. Frank Baylis:** That happened. They put this out. People unwittingly updated their phones. Then suddenly, because of your expertise, it came to your attention. Is that what happened?

**Mr. John Poole:** That's correct. Both when our customers were complaining about it and once we saw the Reddit post indicating that changing the battery could improve your phone performance, that's when we switched our theory from this being a software issue to a hardware issue. That's when we did the analysis and discovered just how severe and how widespread this issue was.

**Mr. Frank Baylis:** Have you seen anything like this in other technologies that you monitor, that a company might change something without advising people and it seriously degrades its performance?

**Mr. John Poole:** We've seen issues in the past where perhaps a new software update will cause a performance degradation. Usually, that's treated as a bug and is fixed. It may be an oversight on the company's part, and it's immediately addressed in the subsequent update, or something—

• (1610)

**Mr. Frank Baylis:** But it's not done on purpose?

**Mr. John Poole:** Generally speaking, it's not on purpose. There may be slight drops—you know, 5% or 10%—due to a new technology or a new way to work around things. A perfect example of this would actually be the Spectre and Meltdown fixes that have come out recently to address security flaws, where there is the potential for having your device run slightly more slowly as a result of these fixes.

**Mr. Frank Baylis:** But that's not hidden from the...?

**Mr. John Poole:** That has received a lot of publicity and people generally understand that this could be a side effect of applying—

**Mr. Frank Baylis:** But it was not hidden from the consumer?

**Mr. John Poole:** Not at all.

**Mr. Frank Baylis:** For this particular one, we can say—well, you can't speak to that.

This is a question for the Competition Bureau.

You said that you've done a lot of work with the digital economy. In your notes you also mentioned, which I found interesting, that you're doing a lot of work in fintech. A lot of people use their iPhones for banking now. You said that you were very happy—“extremely pleased” was your wording—with the recent budget.

What was in the recent budget that helped the Competition Bureau? What was the recommendation that you made to the government, which was in the budget and which you were pleased about?

**Ms. Alexa Gendron-O'Donnell:** Part of what I will do is provide you with the link to our fintech report for a bit more detail. The budget spoke about looking at things like open banking and spoke to fintech more generally. That is what I was referring to.

Fintech to us is a really important topic, as it's something that's evolving. It's really nice to see people interested as well—

**Mr. Frank Baylis:** It's evolving very fast, and the Competition Bureau had given the government some suggestions to be able to keep up, to make sure that it doesn't get abused. Is that...?

**Ms. Alexa Gendron-O'Donnell:** That's right. The suggestions are broad, and really we want to make sure that there are enough regulations that people are comfortable using this kind of new technology but not so many that we're chilling potential innovation. Really, the report is about striking that balance, and the various suggestions that we make are for that purpose. Again, I'd be happy to provide that.

**Mr. Frank Baylis:** Do you feel that the budget struck that balance?

**Ms. Alexa Gendron-O'Donnell:** We think the budget started us down a path that is promising.

**Mr. Frank Baylis:** Thank you.

**The Chair:** Thank you.

We're going to move to Mr. Lloyd.

You have five minutes.

**Mr. Dane Lloyd (Sturgeon River—Parkland, CPC):** Mr. Chair, I'll be splitting my time with my colleague to my right.

My first question is for Mr. Poole.

What would you say is the value difference between replacing the battery and replacing an entire phone? Is there a significant difference in the value to Apple?

**Mr. John Poole:** The value to Apple right now, especially considering that they're operating the battery program at a severe discount.... I unfortunately can't speak to the particular costs of a new battery versus a new phone. It's a lot more revenue for Apple to sell a consumer a new phone than it is to sell them a new battery. We're talking perhaps in the order of magnitude of \$100 for a battery before the program versus \$1,000 for an iPhone.

**Mr. Dane Lloyd:** That's what's really interesting to me, because as a layperson who doesn't have the experience of someone like you, I expect our phones to just get slower over time. When that degradation happens, I think many of us would say to ourselves that perhaps it's time to get a new phone. When these slowdowns happen and they're due to batteries, not the phones themselves, I think many people will go and buy a new phone.

Would you say that this issue has led to a great growth of magnitude and value to Apple, as opposed to what would have been the case if it had been more transparent and had told people about the battery changes?

**Mr. John Poole:** It's hard to say how many people went out and bought a new phone versus replacing their battery due to this issue. I know anecdotally speaking that a number of our customers came to us after we published these results and said exactly that, that they had had a slow phone, that they had been confused and thought simply that it was time to upgrade, so they went out and purchased a new iPhone, realizing now in hindsight that they may have been able to replace the battery and have a phone that operated much faster than it had before.

I do know several analysts who have commented that this iPhone battery replacement program, the severe discount that Apple introduced in December, could have a material impact on the number of iPhone units that Apple ships this year.

**Mr. Dane Lloyd:** Would you say that because people are now aware of this battery issue, that will have a material negative impact on Apple's sales of new phones?

**Mr. John Poole:** I know several analysts are suggesting that, and their reasoning seems sound to me.

**Mr. Dane Lloyd:** You stated that it's unfortunate that it wasn't transparent, but you couldn't really say whether this was planned obsolescence. Would you say, then, that this lack of transparency essentially created a great deal of value for Apple?

**Mr. John Poole:** It's entirely possible that it could have. With consumers encountering a slow phone and deciding to upgrade, it could have shortened an upgrade cycle. Perhaps if the consumer would have held on to a phone for three or four years, then maybe this issue would have caused them to replace the phone after a year and a half instead.

• (1615)

**Mr. Dane Lloyd:** Thank you.

Ms. Gendron-O'Donnell, speaking more broadly and comparing our competition systems with those in other countries, I note from a number of articles that France is pursuing a criminal probe, and other jurisdictions seem to take very tough actions when they see these things happening. Do you see a reason for Canada to move in that direction?

**Ms. Alexa Gendron-O'Donnell:** As I mentioned before, Canada does have both civil and criminal provisions in its act. In terms of things like deceptive marketing and abuse of dominance, we do have quite strong provisions already, even if they are not identical to those of our counterparts. Obviously, the changes to the law itself rest with the department and ultimately with Parliament. I would say that if you look at the penalties available under our act, we have some quite strong ones.

**Mr. Dane Lloyd:** I guess I took all the time from my colleague - sorry - but I have a final question.

Do we have a law in Canada against planned obsolescence?

**Ms. Alexa Gendron-O'Donnell:** The laws in Canada that we enforce don't often name specific types of conduct. We tend to have laws that are broader, for example, against deceptive marketing, against abuse of dominance. I think I described them a bit earlier, so you have a sense of what they cover. The idea is that those laws are designed to capture deceptive marketing generally, ensure truth in advertising generally, and look at abuse of dominance generally. This is kind of where those laws lie.

**Mr. Dane Lloyd:** In your opinion, would it be helpful to your department to have more direct wording, such as specifically stating "planned obsolescence", like they do in France?

**Ms. Alexa Gendron-O'Donnell:** As I said before, the Competition Bureau doesn't hold the policy function with respect to its laws. The department would be the one to speak to you. I'm not in a position to comment on that.

**Mr. Dane Lloyd:** Okay.

Thank you.

**The Chair:** Thank you very much.

We'll move to Mr. Sheehan for five minutes.

**Mr. Terry Sheehan (Sault Ste. Marie, Lib.):** Mr. Chair, before I begin my questioning, I just need a point of clarification.

In our package, we received a letter from the CRTC. It's addressed to you and dated February 26, 2018. In this letter, the commission

identifies how many complaints they have received related to the iPhone performance. Are we able to share that? Is that public information?

**The Chair:** Yes. It was circulated to the entire committee, so there is no objection. We'll actually put that letter on our website as well.

**Mr. Terry Sheehan:** Okay.

That leads into my first question, which is for Alexa from the Competition Bureau.

We have this letter from the CRTC where they identify the number of complaints they received, that being 20. I'm wondering if the Competition Bureau would be able to identify the number of complaints they have received related to iPhones as well.

**Ms. Alexa Gendron-O'Donnell:** As I mentioned previously, we keep information, including complaints, confidential. We are a law enforcement agency, so we conduct our work in confidentiality. That's written into our act and that's also our procedure. We do that to maintain the integrity of our investigations until we get to a point where something can be made public. Alternatively, a party or a third party participating in our process can make anything public at any time, but the bureau itself maintains confidentiality.

**Mr. Terry Sheehan:** You're different from the CRTC in that sense, then, because we have information from them, but you don't....

**Ms. Alexa Gendron-O'Donnell:** That's right. I can't speak to the CRTC, but I can say that the bureau itself is a law enforcement agency. We work with confidentiality.

**Mr. Terry Sheehan:** Fair enough.

Mr. Poole, I caught an interview you did with CNBC back in December. You made some statements that were interesting. You told them that you felt that Apple could have been more transparent with its changes to software, and that it may not be the best idea to skip future updates. You also felt that their communication was not "well".

Could you explain to this committee what you meant by those two statements?

**Mr. John Poole:** Here's what I meant by the first statement commenting on Apple's transparency, or lack thereof. I was disappointed when we discovered this, to realize that this was a change that Apple had introduced with basically no notification to the user. I think when they changed the performance, when they changed the way the phone functions in such a fundamental way, that should have been transparent to the user from the very beginning.

Also, if the battery was degrading to the point where it was affecting other functions on the phone, to have some sort of notification on the phone that would indicate that this was the case would have been great. We had users who'd gone through and said they were experiencing the slowdown. They'd go into the settings application on their phone to look to see whether there was any sort of report to advise people to take their phones or their batteries in for servicing, something which Apple does on other products that they provide. Their laptops, for example, will indicate if your battery is outside of spec and should be replaced. There were no notifications in this regard on the iPhone.

This was very much done under the radar without any real disclosure to customers that this was happening or what steps a consumer could take to either mitigate or remedy this sort of issue.

I would make another comment on encouraging consumers to continue to update their phones. When Apple releases new iPhone software updates, these software updates can include unfortunate changes like this which could affect the way the phone operates. They do also, however, include important security updates. If a user refused to update their phone, they could leave themselves vulnerable to various security issues which could cause nefarious third parties to compromise their phone, their personal information, their banking, and any sort of information that might already be on their phones.

I think as much as consumers have lost some trust in Apple, and the contents of their updates, I think it's still important for consumers to continue to apply the updates for these security reasons.

• (1620)

**Mr. Terry Sheehan:** Thank you.

I'm going to split the rest of my time with MP Longfield.

**Mr. Lloyd Longfield (Guelph, Lib.):** Thank you, and I'll try to sneak in two questions.

First, for Ms. Gendron-O'Donnell, when you're collaborating with other countries, could a problem in one country trigger an investigation in Canada?

**Ms. Alexa Gendron-O'Donnell:** We start our investigations in a number of ways, but speaking with our international counterparts is certainly among the ways we use to determine whether we should begin investigating certain issues.

**Mr. Lloyd Longfield:** Thank you, because with Canadian consumers and American producers, sometimes borders disappear.

**Ms. Alexa Gendron-O'Donnell:** I think we know that products and services are getting more global all the time and to us it underscores the need to work together.

**Mr. Lloyd Longfield:** Great. Thank you.

I have a quick technical question for Mr. Poole.

I'm a hydraulics specialist, so I'm translating this into pressure and flow. When you put power in, when you're trying to get too much pressure out, you can reduce your flow. It sounds like what they're doing in this case is a technical solution. Does your agency look at technical solutions, or do you just look at complaints? Let's say a battery is a replacement. You could put in a larger horsepower

electric motor and a hydraulics system, or you could dial back your flow on motors to be able to get more things done with the same amount of power.

Do you look at technical solutions?

**Mr. John Poole:** We will occasionally look at certain issues. In regard to batteries, we tend to treat the battery as a black box that we don't fully understand.

Our expertise really lies in the processor itself, and generally speaking, we won't speak to the design of a phone, saying that a phone should have a larger battery or a smaller battery, something like that. Our focus really is on the processor itself.

**Mr. Lloyd Longfield:** Okay, thank you.

Thanks, Mr. Chair.

**The Chair:** Thank you very much.

For the final question of this session, we go to Mr. Masse.

**Mr. Brian Masse:** Thank you, Mr. Chair.

Ms. Gendron-O'Donnell, I know that in Australia there's a mediation process going on with Apple on some of their marketing practices, but also in your notes you mentioned that the Federal Court recently upheld a bureau investigation with Hachette, Macmillan, Simon & Schuster, and as well, Apple.

Can you highlight that a little? I've been reading your comments here, and it appears that an agreement was reached and then later on was appealed in the courts, and then was upheld again. Can you please expand on what happened there? It seems that something was reached, and then it was challenged later on. That seems a bit different or unusual.

**Ms. Alexa Gendron-O'Donnell:** That's right. The bureau reached a consent agreement with a number of parties. Under the court system and under the law, a third party who has potentially been affected by a consent agreement can challenge, which is what happened in this case. That has now all been resolved, so the most recent consent agreements that the bureau entered into now stand. There are consent agreements in place with all the list of parties that you saw, that currently stand today.

**Mr. Brian Masse:** Can you confirm that Apple was part of that?

**Ms. Alexa Gendron-O'Donnell:** There's a public consent agreement available on the Competition Tribunal website with Apple and the Competition Bureau that outlines all of those details.

**Mr. Brian Masse:** Okay.

Last, Mr. Poole, with regard to your process now, will you be continuing to use your analyses for not only just Apple, but other phones and devices, in terms of speeds and updates? Is it something that you do on a regular basis and as part of your analyses?

• (1625)

**Mr. John Poole:** We'll be extending the statistical analysis, which we do on a regular basis, to include this sort of analysis for iOS and Android devices. We'll also investigate whether or not we'll need to extend this to both PC and Apple laptops.

**Mr. Brian Masse:** Thank you very much.

**The Chair:** Thank you very much to our two witnesses for coming in today and sharing such wonderful information.

We are going to suspend while we set everything up for our next panellists and then we'll go from there.

• (1625) \_\_\_\_\_ (Pause) \_\_\_\_\_

• (1630)

**The Chair:** Welcome back, everybody.

We are on round two. With us today, from Apple Canada, we have Jacqueline Famulak, the regional counsel for Canada and Latin America, and Simon Potter, who is counsel with McCarthy Tétrault LLP.

You have 10 minutes to present to us. We'll then go into questions.

**Ms. Jacqueline Famulak (Regional Counsel, Canada and Latin America, Apple Canada Inc.):** Good afternoon. My name is Jacqueline Famulak. I manage legal and government affairs at Apple Canada Inc. I have been employed by Apple Canada for over 30 years.

Apple Canada Inc. is a sales and distribution entity. We also have 29 retail stores across Canada. The design, manufacture, and testing of devices has always been done by Apple's parent company, Apple Inc., which is based in California.

I'm here to help the standing committee understand the facts of Apple's efforts to make sure that users of Apple devices get all the benefits from the devices they use, and that these benefits last as long as possible, even in a world of rapid innovation.

Apple Inc. has recently answered a series of questions posed by the chairs of the United States Senate Committee on Commerce, Science and Transportation and the United States House of Representatives Committee on Energy and Commerce. Apple's comprehensive answers to those questions are attached to my written statement. I believe you have received it.

I am here today to answer your questions, but before doing so, I would like to share a few important points at the outset about Apple's actions regarding iPhone batteries and performance, and what the Canadian consumer may have experienced as a result of those actions.

First, Apple would never intentionally do anything to shorten the life of any Apple product or degrade the user experience in order to drive customer upgrades. Apple's entire philosophy and ethic is built around the goal of delivering cutting-edge devices that our customers love. Our motivation is always the user.

Second, Apple's actions related to the performance of iPhones with older batteries were designed specifically to prevent some older models from unexpectedly shutting down under certain circumstances, and we communicated this publicly. Let me explain.

In order for a phone to function properly, the electronics must be able to draw power from the battery instantaneously, but as lithium-ion batteries age, their ability to hold a charge diminishes, and their ability to provide power to the device decreases. Very cold temperatures can also negatively affect a battery's performance. A battery with a low state of charge may also cause the device to

behave differently. These things are characteristics of battery chemistry that are common to all lithium-ion batteries used in all smart phones, not just Apple's.

If power demands cannot be met, the iPhone is designed to shut down automatically in order to protect the device's electronics from low voltage. We do not want our customers to experience interruptions in the use of their iPhones, whether that is making an emergency phone call, taking a picture, sharing a post, or watching the end of a movie.

To address the issue of unexpected shutdowns, we developed software that dynamically manages power usage when, and only when, the iPhone is facing the risk of an unexpected shutdown. This power management software helps keep iPhones on when they otherwise might turn off. It does this by balancing the demand for power with the available supply. The sole purpose of the software update in this case was to help customers to continue to use older iPhones with aging batteries without shutdowns, not to drive them to buy newer devices.

Third, Apple regularly provides software updates for iPhones and our other devices. These software updates can include everything from new features and bug fixes to security updates. Whenever we issue a software update, we include a ReadMe note that has a description of the contents of the update for the customer to review prior to the software installation. In the case of iOS 10.2.1, we stated in the ReadMe note "improves power management during peak workloads to avoid unexpected shutdowns on iPhone".

Those things said, our intention has been to give our customers the best products and the best experiences possible. We take our customer concerns seriously, and we have taken a number of steps to address them.

First, Apple is offering to provide out-of-warranty replacement batteries for \$35 instead of the original price of \$99 to anyone with an iPhone 6 or later, whether they have experienced any performance issues or not. This offer began on December 28, 2017, and is available through to the end of December 2018, so customers have plenty of time to take advantage of it.

• (1635)

Further, Apple is also providing customers with additional information on its website about iPhone batteries and performance, including tips to maximize battery performance.

In addition, iOS 11.3, which is now in public beta, will add new features to give customers easy access to information about the health of their iPhone's battery. It will be available this spring, and the new software will offer power management that will recommend if a battery needs to be serviced. It will also allow customers to see whether the power management is on, and they can choose to turn it off if they wish.

With that, I am ready to answer your questions.

Thank you.

**The Chair:** Thank you very much.

Just to be aware, we do need five minutes at the end for some committee business, so if we can keep our time tight, that would be great.

We're going to start off with Mr. Baylis.

You have five minutes.

**Mr. Frank Baylis:** Thank you, Chair.

Ms. Famulak, thank you for being here. If I understand the issue with the lithium-ion batteries—and we understand it thanks not to Apple, but thanks to Mr. Poole from Primate Labs who explained it to us—when the battery hits about 30%, there is this danger of instant shut-off. Is that correct?

**Ms. Jacqueline Famulak:** Yes. There are a number of circumstances that might give rise to an unexpected shutdown. The chemical age of the battery itself—

**Mr. Frank Baylis:** Yes, it will shut down, and Apple did not want that to happen, so that's what they made this update for. Is that right?

**Ms. Jacqueline Famulak:** Correct. Originally, we found a limited range of iPhone 6s phones that were manufactured incorrectly. We offered a repair program for them. During that analysis, we discovered that other iPhone 6s phones were having shutdown issues.

**Mr. Frank Baylis:** So you had this thing that would shut down. You said you only wanted to do this.... Apple would never do anything to degrade the customer experience, right? You said that. It would only happen when and if it was needed, right? You mentioned also that you would not do anything to degrade the customer experience. Then you also stated this would only happen when and if needed.

**Ms. Jacqueline Famulak:** Yes. The software looks at the variables. It looks at chemical age. It looks at the room temperature. It looks at the state of charge of the battery. It looks at those and adjusts its levels accordingly in order to maximize the performance.

**Mr. Frank Baylis:** What we do know—and we have to say we know this only from Primate Labs, because Apple has not released any of the technicalities you're speaking to. We do know that the problem happens at 30% left on the battery. We also know from their work and studies that, and it's estimated, your slowdown might happen anywhere from 70% to 30%.

Why would you slow the phone down if there's 70% left on the battery if you know the problem is only going to happen when there's 30% left? Why would you degrade the user experience right at 70%?

**Ms. Jacqueline Famulak:** We're not attempting to degrade it. What we're trying to prevent is the unexpected shutdown.

**Mr. Frank Baylis:** But we know it's not going to happen, and we don't know this from Apple. We know this from a Canadian company that discovered this problem, and we know it's going to happen around 30% battery life.

Why would you slow the phone down if it had more than 30% battery life?

● (1640)

**Ms. Jacqueline Famulak:** If there are other factors in existence, such as the chemical age of the battery or the ambient room temperature being very cold.... The software is looking at all three things and deciding at what point.

**Mr. Frank Baylis:** Is Apple ready to release the formula they use? Are you ready to put that out there to say this is why you use it in this way so that theory, what you're stating, can actually be tested?

**Ms. Jacqueline Famulak:** I would have to consult with the parent company in order to release that information.

**Mr. Frank Baylis:** Why would you not release it? I understood that Apple made all these changes and made no statement to anybody about them. Is that a fair statement that when you made this change, you didn't inform anybody?

**Ms. Jacqueline Famulak:** We informed people that we had solved the problem of the unexpected shutdowns. That's what the iOS offer was designed to do.

**Mr. Frank Baylis:** Didn't you feel it necessary to let them know that you were slowing down their phone?

**Ms. Jacqueline Famulak:** We felt it necessary to.... Yes. We felt it was very important to our customers, because what we were hearing from our customers was that the unexpected shutdown was a huge problem, and that a slower phone that can keep recording valuable information or keep watching a movie would be better.

**Mr. Frank Baylis:** I will come back to my question.

Maybe no one's complained to you, but I've heard it, and I have a phone that I complain about when it's slow. It may be news to Apple, but many people don't like a slow phone.

Having said that, if you did need to slow it down at a certain point, why would you slow it down before you needed to?

**Ms. Jacqueline Famulak:** When the other conditions are in existence.

**Mr. Frank Baylis:** That would mean you needed to, but you didn't.

**Ms. Jacqueline Famulak:** In order to preserve the components in the phone, the power will be managed.

**Mr. Frank Baylis:** Let's try another one.

Can you tell us at what point the battery life starts to die? Is it at 30%, as we were told by Mr. Poole, or is that incorrect? Is it at different points, not just 30%? Could it be at 40% or 50%?

**Ms. Jacqueline Famulak:** It's at different points.

**Mr. Frank Baylis:** It could be at different points. What points would those be?

**Ms. Jacqueline Famulak:** I don't have that information.

**Mr. Frank Baylis:** At what point do you absolutely...? What would be the worst-case scenario? I have 70% left on my phone and I need to slow it down at that point. Is that fair to say?

**Ms. Jacqueline Famulak:** It's going to depend on the user and the other factors in existence.

If you have 70% on your phone and it's very cold, the power management might be diverted and you might experience differences in performance, but when the room temperature changes, that might change again. That's what that power management was designed to do.

**Mr. Frank Baylis:** Why can't I know that? You've been found out. Why can't you just explain, "this is the algorithm, and this is how it's going to work on my phone?"

**The Chair:** Be very brief, please.

**Ms. Jacqueline Famulak:** We provided the ReadMe document and the support pages on our website that explain how the power management works and what conditions it works in.

**Mr. Frank Baylis:** Thank you, Ms. Famulak.

**The Chair:** Thank you very much.

We're going to move to Mr. Lloyd.

You have five minutes.

**Mr. Dane Lloyd:** Thank you.

Thank you for coming today and for your testimony.

These actions were unintentional, as you stated, yet it's very likely that because people would have bought new phones based on slower phones, Apple benefited financially. What are you doing to educate people about this problem with the phone?

**Ms. Jacqueline Famulak:** We have continued to provide information, make statements, and communicate to our customers.

I want to make it very clear that we still sell these models of phones. It's not that we're trying to get people to buy iPhone 8s or iPhone 10s, as much as they have different features.

In our statement, we reached out directly to customers who were hearing a lot of information from other sources. We felt it was necessary for us to communicate directly to the consumer and explain what was going on.

I don't think we ever—

**Mr. Dane Lloyd:** Are they telling people about this in the stores when they buy the phones? Have there been letter campaigns, email campaigns? What is being done?

**Ms. Jacqueline Famulak:** Our stores and all of our service providers are aware and have all the documentation and the technical information necessary to replace the batteries.

**Mr. Dane Lloyd:** I'm an iPhone user, and I like my iPhone, but if I hadn't heard about this in the news, I wouldn't know anything about this issue. I just spent 20 minutes on the Apple website and I couldn't find a single thing about this issue. It just feels as though Apple is not really telling people about this.

Can you explain why it's not more widespread?

**Ms. Jacqueline Famulak:** Because the software update was designed to avoid the unexpected shutdown, and that was very successful. The software did do that.

**Mr. Simon Potter (Counsel, McCarthy Tétrault LLP, Apple Canada Inc.):** If you'll allow me, there are several things on the

website. I'll be very happy to send them to you later this afternoon or tomorrow morning.

**Mr. Dane Lloyd:** Thank you.

**The Chair:** Can you send it to the clerk, please?

**Mr. Simon Potter:** Of course, Mr. Chair. We'll do it through the clerk.

**The Chair:** Thank you.

**Mr. Dane Lloyd:** I appreciate that there is this battery campaign, a discount, but it doesn't seem as though very many people are aware of it. Will the pickup be significant? Are people replacing their batteries? How many people have gone in? How widespread is this?

• (1645)

**Ms. Jacqueline Famulak:** It's my understanding that we've had a very good response to it, and that our stores are very active in replacing batteries.

**Mr. Dane Lloyd:** Thank you.

How much longer do I have?

**The Chair:** A minute and a half.

**Mr. Dane Lloyd:** I'll defer to my colleague.

Thank you.

**Mr. Colin Carrie:** Thank you very much, Mr. Chair.

You read out what you did in the case of iOS 10.2.1. You stated that it "improves power management during peak workloads to avoid unexpected shutdowns on iPhone". That was the representation you put with that update. Is that correct?

**Ms. Jacqueline Famulak:** You see it before you install the software.

**Mr. Colin Carrie:** Yes. You know what? I have an iPhone, too, and I love it, but when I get your updates, I just do them. I don't read them, but that's my fault.

Did you have any other representations that mentioned the iOS update may reduce the performance of the user's iPhone?

**Ms. Jacqueline Famulak:** No. The words "power management" were meant to explain that the software will manage the power.

**Mr. Colin Carrie:** You assumed that people would understand that.

**Ms. Jacqueline Famulak:** People who use batteries, I think—all devices have batteries nowadays—are used to the degrading of batteries. I think it's a welcome change to see somebody who's saying they have some software that's going to manage your battery performance and make it last longer.

**Mr. Colin Carrie:** I don't see the two necessarily equating.

Did any of the representations you made mention the consequence of not installing the update?

**Ms. Jacqueline Famulak:** Most likely the unexpected shutdown, because that's what the software update was designed to do.

**Mr. Colin Carrie:** Mr. Poole was also saying that a lot of this was done under the radar and that many people would just automatically do it because they would be worried about not having the upgraded security, but perhaps some individuals might have wanted to make a different choice. Do you feel that you explained it well enough?

**Ms. Jacqueline Famulak:** I think that when people do a software upgrade and it has a ReadMe announcement prior to the upgrade that says “fixes security bug” or that updates a flaw somewhere in the software, they should be doing that. We encourage that, and I think that whether or not a person reads it, the fact that they no longer are having unexpected shutdowns is a benefit to them.

**The Chair:** Thank you very much.

Mr. Masse, you have five minutes.

**Mr. Brian Masse:** Thank you for being here today.

One of the things I'm curious about is where you do your testing for the iPhone.

**Ms. Jacqueline Famulak:** We do it at our headquarters in California and probably at every manufacturing site where we would make batteries.

**Mr. Brian Masse:** Is that where you do your cold weather testing as well? It's a serious question, because when people are using their iPhones in very northern areas, cold would affect performance, and you identified that. Everybody knows that. Do you do your cold weather testing in California?

**Ms. Jacqueline Famulak:** We would probably be doing it in cold rooms, yes. We have extensive testing facilities for doing these things under all different temperatures.

**Mr. Brian Masse:** Okay. Who made the decision on a shutdown at 30%? What Mr. Baylis was getting at was that somebody decided on that 30% to have the software activate and go from being dormant, I guess, to active. Why was it not 20% or 40%? That's what I think he was getting at. Who made that decision?

**Ms. Jacqueline Famulak:** Mr. Poole used that 30% number, and I'm not sure it's entirely accurate. I described the other factors that come into play when a battery is going to determine whether it needs to manage its performance or whether it's just going to shut down.

**Mr. Brian Masse:** Okay. Let's get rid of the percentage. Who makes the decision? Obviously it was decided that the software be installed on the phones, and across the global platforms, I suppose. Who made that decision?

**Ms. Jacqueline Famulak:** To update the iOS for the unexpected shutdown?

**Mr. Brian Masse:** Yes, and to not disclose that to the public. Who in Apple decided? It's a known thing that you had there.

You have the product and then you have the software, which is designed to affect the phone. The phone then was affected, but that wasn't disclosed to the public. Who made that decision in Apple, in your organization, not to disclose that to the public, including Canadian operations? Who was that person?

**Ms. Jacqueline Famulak:** There was no decision made not to disclose. We did provide the statement that explained it.

If I could step back, when we first did the update, it was designed to prevent the unexpected shutdown, and it was successful. We have a huge number of our customers who do these updates regularly.

Moving forward, we started hearing that some of our customers were concerned about a slowness. We looked at the data and we found that the algorithm this offer was using... Is it cold? Is the battery old? Is it depleted? It was that sort of thing. Also, how is it managing it? We provided a statement on December 28 that we put out to the public. We put it out directly to our customers so they would understand and to try to calm the noise that was going on about it, because all that information was causing concern.

• (1650)

**Mr. Brian Masse:** I still don't know who made that decision. That's important for me and for Canadian consumers. Was that decision made in California?

**Ms. Jacqueline Famulak:** This issue can affect phones worldwide.

**Mr. Brian Masse:** Why do you think Apple is now in front of the Department of Justice in the United States and in Spain, France, and South Korea? There are a number of different... What is it about this case that is now bringing you in front of them? Do you think there was something wrong in what Apple did, and what was that?

**Ms. Jacqueline Famulak:** I don't think Apple did anything wrong.

**Mr. Brian Masse:** Okay, so is it generally the other countries, including Canada, and the consumers that are wrong, not Apple?

**Ms. Jacqueline Famulak:** No, I believe that we continue to communicate to the consumers in the best way we can by communicating to them directly about what they are experiencing. I can't comment at all about what the other countries have alleged or are investigating.

**Mr. Brian Masse:** With regard to the refund of \$35, I notice that in all of your media things you mention that it's \$99 and you do it for \$35. Why was that figure chosen? Who chose that figure? It was \$99 originally, and then there is shipping as well. Why not just replace the battery? You affected the performance anyway...

**Ms. Jacqueline Famulak:** To be clear on what the program is, it is a replacement program for \$35, so we're not refunding people \$35.

**Mr. Brian Masse:** Right.

**Ms. Jacqueline Famulak:** Anybody can go to a retail store or an authorized service provider in Canada and obtain the battery replacement for \$35.

**Mr. Brian Masse:** If you live in northern Ontario, for example, you have to use shipping. Why wouldn't Apple cover that?

**Ms. Jacqueline Famulak:** I believe that we have service providers. We have over 1,300 service providers across Canada.

**Mr. Brian Masse:** In terms of the decisions, though, it was \$99 and went down to \$35. I just think you should be doing it, but that's my personal opinion. Where was that decision made? I'm curious. I think Canadian consumers want to know.



Is it all coming out of California? If that's the case, fine, but we're looking for answers here.

**Ms. Jacqueline Famulak:** The decision is made on a global basis, and the price is a Canadian price. I believe it's \$29 U.S., so we have \$35 Canadian, and it's applied equally around the world.

**Mr. Brian Masse:** Okay.

With regard to moving forward, will Canadian consumers get reciprocity should Apple change its policies related to reimbursement or compensation with the court cases in the United States, Spain, France, and South Korea? Will Canadians receive the same treatment and immediately as those other countries undergo their separate investigations of Apple?

**Mr. Simon Potter:** Mr. Masse, thank you very much. This gives me an opportunity to speak as the lawyer here.

With respect, I think it's not appropriate to ask a company to decide in advance what to do about a result or a settlement that is unknown, in future, in an unknown country, and that you just wait to see—

**Mr. Brian Masse:** With all due respect, you're our witness here, and our chair will decide what's appropriate or not appropriate—

**Mr. Simon Potter:** I agree, and—

**Mr. Brian Masse:** I believe it's a fair question to ask whether or not Canadians are going to receive the same reciprocal treatment. I thought it would be a policy of Apple's.

Apparently there seems to be something with the \$35, and that being matched, as you mentioned, with regard to American pricing. I want to make sure, though, that Canadian consumers are going to get the same.

Should Apple change and wipe out the \$35, are Canadian consumers, for example, going to get the same thing? That seems like a policy decision by Apple.

**The Chair:** Mr. Masse, we're way over on your time.

We can't force the witness to answer. He's given his answer. You can try again when you come back to it, but we are going to move on.

Mr. Erskine-Smith, you have five minutes.

**Mr. Nathaniel Erskine-Smith (Beaches—East York, Lib.):** Thanks very much.

Thanks to the witness.

Apple successfully reduced the occurrence of unexpected shut-downs but slowed down launch times and performance. Now, today you've strangely said that Apple did nothing wrong, but the issue is disclosure, and Apple apologized for non-disclosure in relation to the slowed performance.

Was the non-disclosure intentional or inadvertent?

**Ms. Jacqueline Famulak:** We don't think that we miscommunicated anything at any time. What we originally said was—

• (1655)

**Mr. Nathaniel Erskine-Smith:** Why did you apologize?

**Ms. Jacqueline Famulak:** We apologized because our consumers were not hearing directly from us. Our consumers are the people who are relying on Apple to provide the information to them. There was a lot of noise in the media and we wanted to make it very clear, so we apologized that we hadn't reached out sooner—

**Mr. Nathaniel Erskine-Smith:** You think you disclosed to consumers the slowed performance issue.

**Ms. Jacqueline Famulak:** No. Our apology was to not communicate with them directly.

**Mr. Nathaniel Erskine-Smith:** For non-disclosure, right.

Was the non-disclosure in relation to the slow performance intentional or inadvertent?

**Ms. Jacqueline Famulak:** We didn't not disclose anything. We didn't have anything to not disclose.

**Mr. Nathaniel Erskine-Smith:** With regards to the slowed performance of the phone, the very reason you're attending today, that you did not disclose to consumers was that non-disclosure intentional or inadvertent?

**Ms. Jacqueline Famulak:** It was not intentional.

**Mr. Nathaniel Erskine-Smith:** Okay, so if it was not intentional, what I would like is an undertaking for any internal correspondence, advice, or opinions for Apple Canada or its parent U.S. company with respect to whether the slowed performance issue associated with the update should have been disclosed to consumers.

**Mr. Simon Potter:** Are you asking for all the legal advice given to Apple?

**Mr. Nathaniel Erskine-Smith:** If you deem it to be solicitor-client privilege, so be it, but internal correspondence certainly isn't all solicitor-client privilege. It's any internal correspondence, advice, or opinions that you're able to disclose, absent solicitor-client privilege, for Apple Canada or its parent U.S. company with respect to whether the slowed performance issue associated with the update should be disclosed.

**Mr. Simon Potter:** I'm not going to make that undertaking. If the committee wants to make a direction about things, we'll reconsider, but the fact is, as people here know, Apple is exposed to a number of class actions in the United States—

**Mr. Nathaniel Erskine-Smith:** You're before a House of Commons committee that has subpoena powers, and you're at risk of contempt of the House not to answer our questions.

**Mr. Simon Potter:** I beg your pardon, Ms. Famulak is not here under subpoena—

**Mr. Nathaniel Erskine-Smith:** No, that we...

Okay, I'm just going to go on.

**Mr. Simon Potter:** —and if you issued one, it would be a different situation—

**Mr. Nathaniel Erskine-Smith:** Just one second, please.

**Mr. Simon Potter:** —and what I am saying, Mr. Chair, with respect, is—

**Mr. Nathaniel Erskine-Smith:** One second, please. Mr. Potter.

**Mr. Simon Potter:** —that there's a considerable amount of litigation out there.

**Mr. Nathaniel Erskine-Smith:** Okay, so it's a refusal to—

**The Chair:** Excuse me. Thank you.

They're here voluntarily. They're not here under subpoena.

**Mr. Nathaniel Erskine-Smith:** I understand that.

**The Chair:** Please let Mr. Potter finish answering his question, and it's up to them how they choose to answer the question.

**Mr. Nathaniel Erskine-Smith:** So the answer is a refusal.

Of options in terms of notifying customers of the issue, encouraging battery replacements, making it easier to replace the batteries, why not give consumers the option and make it easy to replace batteries? You have airplane mode and low battery mode.

Why was the best course to proceed with this solution and not disclose to customers that there would be slower performance?

**Ms. Jacqueline Famulak:** To prevent the unexpected shutdown.

**Mr. Nathaniel Erskine-Smith:** Okay.

You're reducing prices through December 2018 for batteries. Is there an estimated cost to Apple for that?

**Ms. Jacqueline Famulak:** Well, it depends on the number of people who take us up on the replacement program, but I can—

**Mr. Nathaniel Erskine-Smith:** Has Apple not estimated a cost?

**Ms. Jacqueline Famulak:** We don't stand to profit from it, if that's what you're asking.

**Mr. Nathaniel Erskine-Smith:** Right, so there's a cost to Apple for offering this through December 2018. Apple has not estimated the cost to the company.

**Ms. Jacqueline Famulak:** I don't have that information for you.

**Mr. Nathaniel Erskine-Smith:** Can that information be provided to the committee?

**Ms. Jacqueline Famulak:** I'm not sure we would disclose that.

**Mr. Nathaniel Erskine-Smith:** Okay.

Is Apple ready to fully compensate consumers who purchase the new phone unnecessarily as a result of the material non-disclosure?

**Ms. Jacqueline Famulak:** The circumstances under which somebody decides to upgrade a phone are individual, so it would be very difficult to say that someone went out and purchased a new phone because their battery was low. All batteries degrade over time, so people eventually—

**Mr. Nathaniel Erskine-Smith:** We're not talking about batteries, though. We're talking about slow performance of the phone. If they don't know why there's slow performance, because there's been an update that slows their phone that they're unaware of, and they purchase a new phone because of that material non-disclosure, will they be compensated?

**Mr. Simon Potter:** If you'll allow me, Mr. Chair, the question, or a variation of it, is posed in four class actions in Canada and over 50

class actions in the United States. There will be a result, one way or another, on those things as to whether there was a material non-disclosure and who qualifies to be a member of the class in each case. Perhaps that's better left to those cases.

**The Chair:** Thank you very much.

We're going to move to Mr. Carrie.

**Mr. Colin Carrie:** Thank you very much, Mr. Chair.

Thanks again to the witnesses.

Canadians are big fans of your products. They really like them. I think in my house we have eight of your products. One of the things Mr. Poole brought to my attention that I wasn't aware of, as this was coming down the pike, was that there were Apple customers who went to Apple stores and had their devices evaluated, and they were told that there wasn't really a problem that was...I'm quoting improperly.

With this as a new experience for Apple, I suppose, has Apple put in some internal operational changes so that if something like this comes up, it could be brought to the public's attention a little quicker and maybe find a quicker solution?

• (1700)

**Ms. Jacqueline Famulak:** In terms of putting together a replacement program?

**Mr. Colin Carrie:** I'm thinking about in the future, if you have an issue like this, if your people on the front line are seeing some problems, if people are posting on the Internet—with the Internet people are becoming aware of things very quickly now. Has there been an update to your internal communications to improve them so if something like this happens in the future, consumers won't be as edgy about the product?

**Ms. Jacqueline Famulak:** I think one thing that we realized was that we communicated as much as we possibly could about the unexpected shutdown problem, the steps we took, and how people should update their software. December 28 was when we said to ourselves, "We need to talk directly to our customers, do it as soon as possible, and not let the noise out there affect them."

Yes, the lesson was learned. You always have to listen to your customers, and you need to react quickly when they have concerns.

**Mr. Colin Carrie:** Was Apple aware of how many customers out there perceived the company to be engaging in this term that was brought up with the questioning, this planned obsolescence thing?

**Ms. Jacqueline Famulak:** Absolutely not.

**Mr. Colin Carrie:** I'm just curious, why would an owner of an iPhone, knowing that replacing the battery might restore the performance of their device, choose to replace their iPhone if they knew just by replacing the battery they would get their performance back?

**Ms. Jacqueline Famulak:** Our newer devices have better features, and there's so much.... Even in the short period of time since the iPhone 6 was released to today, there are changes in the way that people use their smart phone devices, and so they may choose to go with the more modern, updated features on the new devices and choose to update that way rather than just replace the battery.

**Mr. Colin Carrie:** Okay. It appears that the wait time to get the batteries replaced is eight weeks for someone who has an older phone. I know now that I depend on my iPhone, and an eight-week wait might be....

**Ms. Jacqueline Famulak:** We're working as fast as we can.

**Mr. Colin Carrie:** That's good, thank you.

**The Chair:** We're going to move to Mr. Sheehan.

You have five minutes.

**Mr. Terry Sheehan:** Thank you, Mr. Chair, and thanks to our presenters.

I have a few questions.

We're trying to figure out the number of complaints. Obviously, you must track the number of complaints as they relate to the iPhone 6. Are you able to share with the committee how many complaints you've received about that?

**Ms. Jacqueline Famulak:** We received complaints about the unexpected shutdown and we were tracking that. That's how we sent off our engineers to solve the problem.

We have different categories that we record customer issues in, but I don't have numbers specifically for Canada.

**Mr. Terry Sheehan:** Would you say it's most of the phones or a small number of phones?

**Ms. Jacqueline Famulak:** I would say it's a very small number of phones.

**Mr. Terry Sheehan:** In talking with my constituents in Sault Ste. Marie who have iPhones and have had iPhones all along—they had the iPhone 4, the iPhone 5—their question is why the iPhone 6.

**Ms. Jacqueline Famulak:** The iPhones 4 and 5 were not affected because they didn't have the performance features that started coming out. As I described, every phone is better, has more stuff that you can do, and has enhanced components, so the 4 and 5 are not affected. They're also a smaller form factor. It started with the 6.

**Mr. Terry Sheehan:** Is it the same battery in the 4, the 5, and the 6?

**Ms. Jacqueline Famulak:** I believe it's a different battery. I can confirm that for you, if you'd like me to, but I think it has to do largely with the number of features and the form factor of the 4 and the 5.

**Mr. Terry Sheehan:** That would be important information to have. Is it the same battery in the 4 and 5 that was put in the 6, and it's a performance issue, or is it a different battery, and why?

**Ms. Jacqueline Famulak:** I'm no engineer, but I think even if it was the same battery, the performance of those devices was less than the new devices.

**Mr. Terry Sheehan:** Are the 7, the 8, and whatnot experiencing the same problems as the 6?

• (1705)

**Ms. Jacqueline Famulak:** Again, the new phones, the 8 and the 10 have a lot more features, and they're engineered differently. They have different batteries and different components in them, so they're not experiencing the problem.

**Mr. Terry Sheehan:** There are different batteries that are put in the phones at different times.

**Ms. Jacqueline Famulak:** Yes.

**Mr. Terry Sheehan:** Okay.

We'll need some engineers to help us through that.

In your message to your customers, you talked about your warranty. MP Carrie pointed out the length of time it's taking, and people are complaining about replacements for those batteries. People complain that because they didn't know it was an issue, as some of my colleagues on this side of the table have identified, they went out and purchased a new phone. They just thought the phone was at its end of life and not performing well, so they went out and purchased one out of pocket. That was a challenge.

Whether it was intentional or unintentional, one would assume that profits are going to peak. Sales went up during that time frame. Are you able to verify that sales went up for—

**Ms. Jacqueline Famulak:** —for newer devices? That's an interesting question, but our sales always go up in the month of December because it's Christmastime.

**Mr. Terry Sheehan:** Year after year, but was it more so this time?

**Ms. Jacqueline Famulak:** We came out with new devices also this year, the 8 and the 10 just before Christmas, so we're not sure.

**Mr. Terry Sheehan:** I guess that's something we could probably pull because it's a public company. We could probably see the numbers for ourselves if we wanted to.

**Ms. Jacqueline Famulak:** Apple Canada is not a public company. It's a private company.

**Mr. Terry Sheehan:** You can't get that information, then?

**Ms. Jacqueline Famulak:** You would have to look at the Apple Inc. sort of aggregate numbers.

**Mr. Terry Sheehan:** We'll assume that sales went up, anecdotally.

**Mr. Brian Masse:** Apple reported that the final quarter 2018 was the most successful quarter in its history from a revenue standpoint of \$88 billion. That equates to a \$20-billion profit, also a record for Apple.

**Mr. Terry Sheehan:** Thank you, Brian.

Continuing on with the ideas of either replacing the battery or buying a new phone, there was another solution that was posted on your website. You were going to issue an iOS software update with new features that give the user more visibility on the health of the iPhone battery. Has that happened yet?

**Ms. Jacqueline Famulak:** I mentioned that. That's iOS 11.3. It's in public beta now. It's going to be released in the springtime. It's going to give the user more information about their battery.

We already do provide a lot of information on our support pages, on our website, but under 11.3, you'll be able to see on your phone the state of the battery and the performance. If you wish to have these features on, it will turn on the performance management, and it will notify you when it's time to replace your battery.

**Mr. Terry Sheehan:** Okay, so that has been going ahead to circumvent many of the issues that are going on.

I think I'm running out of time, Mr. Chair.

**The Chair:** Yes, you have run out of time.

We're going to move to Mr. Longfield.

You have five minutes.

**Mr. Lloyd Longfield:** Thanks, Mr. Chair.

I really appreciate your coming in. It's a difficult thing to try to answer the range of questions. It feels like question period all of a sudden, so I thank you for doing the great job you're doing in keeping up with us.

I want to come more to the technical side. I started talking about this last time and ran out of time.

When you have so much available power, and from that power you're getting outputs, and depending on the number of applications, you're going to be able to operate at different speeds, from what I understand, the more you enhance the product, the more power you're going to be taking in order to drive the product.

As I mentioned, I was a machine designer in my previous life, and people would add things to my machines and then call me because it had shut down, breakers were thrown, and whatever else. You described the slowing down of the system so it could accommodate more things. You can do more things, but you have to sacrifice something in order to do that with the current design. I can empathize with the designers. Now you have a solution that wasn't available before so you can say that you could let the customers know when the conditions are changing or putting them into a risk mode so that they can choose whether to shut down or go more slowly. It sounds like the designers have been working in the background on the physical limitations because of the combination of what you're trying to do, how many applications you're trying to run, and what temperature you're operating at.

Am I summarizing the technical side of this?

**Ms. Jacqueline Famulak:** Yes. This is how it was explained to me—and I'm no engineer. The engineers developed a look-up table that is looking at different things. It's looking at the workload that the user is putting on it. Are they watching something or playing games? Then they're looking at the ambient room temperature.

Now, I mentioned cold temperatures, but the iPhone device will also shut off if it's extremely hot. That's a safety feature that's always existed. It's looking at ambient room temperature. It's looking at the chemical age of the battery, as batteries do age. Then it's looking at the charge status of the battery. It's dynamically operating, and as

you said exactly, it's shifting energy in some place to compensate for something else. If it changes, it changes.

It's also really important to say that this doesn't happen to everybody all the time.

● (1710)

**Mr. Lloyd Longfield:** It sounds to me like it's a technical problem.

There was a news item today. A competitor's product—not an Apple product—got too hot on an airplane and burned a person who was operating the unit at the time. It sounds like physical characteristics are what we're bumping up against here, and you're working on some technical solutions.

I used to take the blame for people trying to get more horsepower than a machine could provide, and I had to explain horsepower. You can only get so much out of Mother Nature and especially when losses start increasing because of the age of the product.

On the testing of the units, then, over the range of temperature, is there a standard minimum temperature? I know when we used products out of Europe they tested at a slightly higher temperature than what we were testing in Canada and we had to make allowances for lower temperature operations.

When you're operating out of California, is there a global standard for temperature, where you're going from -20° to 40°, or something along those lines?

**Ms. Jacqueline Famulak:** I could probably take this away and try to get you more comprehensive answers, but what I can tell you is that the testing.... We have the same devices everywhere in the world and we have standards that we have to meet, different standards in different countries. What we do is make sure that we comply with all of them—

**Mr. Lloyd Longfield:** Right.

**Ms. Jacqueline Famulak:** —so we have to be testing very vigorously for all the various situations in order to make sure that we meet all the standards that are required.

**Mr. Lloyd Longfield:** Yes.

The technical comparisons in terms of marketing are probably not something you would normally market, for example, how many more features you're running on your phone compared to other phones, because—

**Ms. Jacqueline Famulak:** —the user experience is so different.

**Mr. Lloyd Longfield:** Right.

I wanted to put that on the table. I think I'm sympathizing possibly more than some of my colleagues because of my working in a field of trying to get as much power out of a machine as you can, and at some point you can't get any more power without changing something.

**Ms. Jacqueline Famulak:** I think you would also agree that you'd rather keep the hydraulic machines that you're familiar with running than have them unexpectedly shut down.

**Mr. Lloyd Longfield:** Absolutely. The worst failure you can have is an unexpected failure. It's better to have a predictable failure in any event, even on a phone.

**Ms. Jacqueline Famulak:** I agree.

**Mr. Lloyd Longfield:** Thank you, Mr. Chair.

**The Chair:** Thank you very much.

For the last two minutes, we go to Mr. Masse.

**Mr. Brian Masse:** Thank you, Mr. Chair.

Maybe I can clarify what I'm trying to reach. Does Apple have a policy in terms of consumer compensation that's global? We have a series of civil lawsuits that are out there, and then you have government investigations. Your compensation model for consumers, is that a universal policy among all Apple users, or is it different state by state?

**Ms. Jacqueline Famulak:** Can you clarify what you mean by compensation?

**Mr. Brian Masse:** The battery replacement, for example.... What I'm trying to get at is whether the Canadian consumers are guaranteed under Apple's policies to receive the same treatment as, for example, the United States customers or customers in France or customers in Israel. Do we get that automatically? Is that the policy of Apple, or does it go state by state to decide the policies on how it treats its consumers?

**Ms. Jacqueline Famulak:** Our customers worldwide are our reason to be so we have to listen to them. I can't imagine that we would favour one country's customer over another.

**Mr. Brian Masse:** Okay, but you don't know if that's the policy or not. I think it's a simple question I'm asking you.

**Ms. Jacqueline Famulak:** It's our philosophy to listen to our customers.

**Mr. Brian Masse:** There's a difference between a philosophy and a policy. Then I guess it's your philosophy, so then I expect it's the same thing—and this is what I'll come away with—that Canadian consumers are going to get the exact same treatment as anybody else in the world.

**Ms. Jacqueline Famulak:** They currently are.

**Mr. Brian Masse:** Okay, that's what I'm—

**The Chair:** Sorry, I just want to interrupt for a second.

I know you didn't have the answer, but could you follow up with that and forward it if you can get us the answer to that? I don't know if there is an answer.

**Mr. Simon Potter:** Certainly, Mr. Chair, we will find out if there's a better answer to give than the answer Ms. Famulak has already given, that Canadians have been treated identically to everybody so

far, and whether there's any policy in place that makes that unexpected in future.

• (1715)

**Mr. Brian Masse:** Thank you. That's what we're looking for, whether or not that's the policy of provision.

I know that I have limited time, Mr. Chair.

I have another question. Apple, for example, in Canada has fallen from 73% of the market in 2010 to 51% of the market in 2017. This obviously has an effect on your operations, but is this a one-off? Have there been any other unknowing changes to software related to performance enhancement in the previous applications, or have there been subsequent to this any other slowdowns or deliberate changes without consumer knowledge? Is this a one-off at the end of the day?

**Ms. Jacqueline Famulak:** What we communicated is consistent with the way we always communicate to our customers about software updates and what we do with that README statement. As I described before, it could be different every time. There are always features that are being constantly re-evaluated and updated. Is this a one-off in terms of the power, are you asking, or the unexpected shutdown? We sure hope the unexpected shutdown problem is solved now.

**Mr. Brian Masse:** In terms of software performance, though, without customer knowledge, have any other updates had similar programming to what we're currently looking at?

**Ms. Jacqueline Famulak:** This is the current software right now, so as I described, 11.3 is coming out with some enhanced features.

**Mr. Brian Masse:** Right, okay.

Thank you very much for your time here today.

**The Chair:** Thank you very much.

I don't normally jump in with my own questions and comments. However, I will on this one. I had the same situation with my iPhone, and this is the first that I'm hearing.... My phone was shutting down at 30% and I took it to an Apple store and didn't hear anything about this. I love Apple. It's a great product for me. I was disappointed because I remember walking into the Apple store and being very frustrated with the lack of answers that I was getting because it wasn't an older phone. It was relatively new. Take that back for what it is. It was very frustrating for me.

Having said all that, I thank our guests for coming in. I hope it wasn't too uncomfortable, but we learned a lot today. We are going to suspend for two minutes and then we're going to go in camera.

*[Proceedings continue in camera]*





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